

What is claimed is:

1. A vibrator comprising:
a coreless coil;
a driver including a magnet inserted in said coreless coil, a yoke for sandwiching said coreless coil and opposing said magnet and a top plate; and
at least one suspension for carrying resiliently said driver,
an alternate current being applied to said coreless coil to generate vibrations by reciprocation of said driver in an axial direction of said coreless coil.
2. The vibrator according to claim 1, wherein said driver includes at least one weight attached to said yoke.
3. The vibrator according to claim 1, wherein said suspension includes a pair of suspension members comprising plate springs, in which one end of each suspension member is fixed and another end of the suspension member is opened, said driver being pinched by the another ends of the pair of suspension members.
4. The vibrator according to claim 3, wherein the pair of suspension members is disposed axisymmetrically and the driver is reciprocated in the axial direction.
5. The vibrator according to claim 4, wherein the pair of suspension members are disposed to pinch said driver in the axial direction in which said driver is reciprocated.
6. The vibrator according to claim 1, wherein said coreless coil, driver and suspension are contained in a case.

7. The vibrator according to claim 6, wherein said case includes a frame having an opening for surrounding the driver, a base for fixing the coreless coil and closing one side of the opening of the frame, and a protector for closing another side of the opening of the frame.

8. The vibrator according to claim 7, wherein said case has a spacer, said suspension being pinched between the spacer and frame.

9. A method for manufacturing a vibrator, comprising:

a process for mounting a coreless coil on a portion corresponding thereto in each of a plurality of bases for a plurality of vibrators arranged on a collective base plate capable of taking out the bases for the vibrators;

a process for overlapping and mounting a first collective spacer plate capable of taking out a plurality of spacers for the vibrators, on said collective base plate so as to correspond each spacer to each base;

a process for overlapping and mounting a first collective suspension plate capable of taking out plurality pairs of suspension members for the vibrators, on the first collective spacer plate so as to correspond a pair of suspension members for each vibrator to each spacer;

a process for overlapping and mounting a collective frame plate capable of taking out a plurality of frames for the vibrators, on the first collective suspension plate so as to correspond each frame to the pair of suspension members;

a process for containing each of a plurality of drivers each having magnets inserted in each of the corresponding coreless coils, yokes for facing the magnets and pinching the coreless coils, and top plates in each of the frames for the vibrators, respectively, and for supporting each driver on the pair of suspension

members in the first collective suspension plate;

a process for overlapping and mounting a second collective suspension plate capable of taking out plurality pairs of suspension members for the vibrators, on the collective frame plate so as to correspond a pair of suspension members for each vibrator to each frame;

a process for overlapping and mounting a second collective spacer plate capable of taking out a plurality of spacers for the vibrators, on the second collective suspension plate so as to correspond each spacer to the pair of suspension members for each vibrator;

a process for overlapping and mounting a collective protector plate capable of taking out a plurality of protectors for the vibrators, on the second collective suspension plate so as to correspond each protector for each vibrator to each spacer; and

a process for cutting the collective base, first collective spacer, first collective suspension, collective frame, second collective suspension, second collective spacer and collective protector plates, which are overlapped and separating into an individual vibrator.